MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
AND
MAINE WASTE DISCHARGE LICENSE

FACT SHEET

Date: **October 17, 2002**

PERMIT NUMBER: **ME0101478**
LICENSE NUMBER: **W000682-5T-F-R**

NAME AND ADDRESS OF APPLICANT:

Lewiston - Auburn Water Pollution Control Authority
P.O. Box 1928
Lewiston, Maine 04241-1928

COUNTY: **Androscoggin County**

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

Lewiston - Auburn Water Pollution Control Authority
535 Lincoln Street
Lewiston, Maine 04241-1928

RECEIVING WATER AND CLASSIFICATION: **Androscoggin River/Class C**

COGNIZANT OFFICIAL **Mr. Clayton M. Richardson, P.E.**
TELEPHONE NUMBER: **(207) 782-0917**

1. APPLICATION SUMMARY

A. Application: The applicant has applied to the Department for renewal of Waste Discharge License # W000682-47-C-R, which was issued on July 11, 1995 and expired on July 11, 1999. The WDL approved the discharge of 14.2 million gallons per day (MGD), on a monthly average basis, of secondary treated municipal waste water and an unspecified volume of untreated sanitary/storm water from one combined sewer overflow (CSO) structure to the Androscoggin River, Class C in Lewiston, Maine.

B. Permit Summary: On January 12, 2001, the Department received authorization from the U.S. Environmental Protection Agency (EPA) to administer the National Pollutant Discharge Elimination System (NPDES) program in Maine. From this point forward, the program will be referenced as the Maine Pollutant Discharge Elimination System (MEPDES) program.

1. APPLICATION SUMMARY (cont'd)

Upon issuance of a final MEPDES permit for the facility, NPDES permit #ME0101478 last issued for the facility by the U.S. Environmental Protection Agency (EPA) on September 23, 1999, will be superseded. Once superseded, all terms and conditions of the NPDES permit become null and void. The MPDES permit will have the same number as the NPDES permit number.

i. LAWPCA has two physical outfalls which discharge to the river, namely Outfall 001 which discharges treated effluent from the treatment plant and Outfall 002 which is a combined sewer overflow (CSO) which discharges combined untreated seweage and stormwater from Structure B to the river. Internally the treatment facility has two waste streams to be monitored which discharge to the river through Outfall 001 and these will be referenced as follows:

a. Outfall 001A – Outfall 001A was the monitoring point for secondary treated waste water in the previous permit and WDL and will not be utilized in this permit because 001A discharged combined secondary treated waste water and primary only treated waste water during wet weather events.

b. Outfall 001B – Outfall 001B was established by the EPA for reporting acute and chronic test results but will not be utilized in this permit.

c. Outfall 001C – This permit establishes Outfall 001C for secondary treated effluent discharged from the facility which shall be monitored for flow and sampled prior to the chlorine contact chamber for BOD_5, BOD_5 % removal, TSS, and TSS % removal. Samples for pH, total residual chlorine, *E. coli* bacteria, settleable solids, WET testing and chemical specific testing shall be collected at the discharge end of the chlorine contact chamber. The effluent shall be sampled once in five years for zinc.

d. Outfall 001D –This permit establishes Outfall 001*D for primary treated effluent discharged during secondary bypass conditions which shall be monitored for surface loading rate, flow, and number of days overflow occurs, and sampled prior to combining with the secondary treated effluent, which is prior to the point of chlorine injection, for BOD_5, BOD_5 % removal, TSS, and TSS % removal. Samples for pH, total residual chlorine and *E. coli* bacteria shall be collected at the discharge end of the chlorine contact chamber.

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II. This permitting action carries forward the following limitations and monitoring requirements from the previous licensing action dated 7/11/95:

a. The monthly average flow of 14.2 MGD.

b. The monthly average and weekly average mass and concentration limits for biochemical oxygen demand (BOD5) and total suspended solids (TSS).

1. APPLICATION SUMMARY (cont'd)

c. The daily maximum limit of 0.3 ml/L for settleable solids.

d. The monthly average and daily maximum limits for *E. coli* bacteria

e. Seasonal limits and monitoring requirements for *E. coli* bacteria and total residual chlorine.

f. Annual whole effluent toxicity (WET) and chemical specific testing.

III. This permitting action is different from the previous licensing action in that:

a. Daily maximum mass limits for BOD_5 and TSS have been eliminated in this permit.

b. A monthly average percent removal of 85% for BOD5 and TSS has been established for the secondary treated waste water, Outfall 001C.

c. The pH range limit of 6.0 –8.5 standard units (SU) has been revised to 6.0-9.0 SU.

d. Daily maximum mass and concentration limits for zinc have been established.

e. The weekly average limit of 0.1 ml/L for settleable solids has been eliminated from the permit.

f. New Special Conditions (E, F, N and O) have been established in the permit to be consistent with the requirements of the MEPDES program.

g. New technology based monthly average and water quality based daily maximum concentration limitations for total residual chlorine (TRC) have been established for Outfall #001C.

h. Discharge monitoring requirements for flow, BOD, BOD % removal, TSS, and TSS % removal, have been established for Outfall 001D which is the discharge of primary treated waste water. Also, discharge limitations and monitoring requirements for TRC, pH and *E. coli* bacteria have been established for Outfall 001D.

i. The facility was previously authorized to receive and treat 15,000 gallons per day (GPD) of septage. This permit allows the facility to receive and treat up to 40,000 GPD of septage.

C. History: The most recent relevant licensing and permitting actions include the following:

July 11, 1995 – The Department issued Waste Discharge License (WDL) #W000682-47-C-R which superseded #W000682-47-A-R issued on September 16, 1986 and authorized the Lewiston-Auburn Water Pollution Control Authority to discharge 14.2 million

1. APPLICATION SUMMARY (cont'd)

gallons per day (MGD) of treated waste waters to the Androscoggin River. The WDL expired on July 11, 1999.

September 21, 1999 – The Department issued water quality certification #W000682-68-E-N certifying that the discharge proposed in a pending National Pollutant Discharge Elimination System (NPDES) permit was in compliance with applicable sections of the Federal Water Pollution Control Act.

September 23, 1999 – The EPA issued NPDES permit #ME0101478 with secondary treatment requirements as specified by the Clean Water Act (CWA). The NPDES permit #ME0101478 issued on September 23, 1999 superseded NPDES #ME0101478 issued on April 15, 1996.

July 26, 2000 – LAWPCA filed a renewal application with the Department.

January 12, 2001 – The Department received authorization from the EPA to administer the NPDES program in Maine. The new program is being referred to as the MEPDES program.

March 21, 2002 – The Department and LAWPCA entered into a Consent Agreement to address issues associated with plant capacity and operation during periods of higher than average flow. On 288 days between January 1, 1997 and December 31, 2000, LAWPCA diverted waste water directly from the primary clarifers to the chlorine contact tank when total flows were within the design parameters of the treatment facility. For the number of license limit violations of BOD_5, TSS, *E. coli.* bacteria, TRC, settleable solids and septage volumes added to the treatment system, see the Consent Agreement signed by the Board of Environmental Protection on March 21, 2002. The Consent Agreement specifies physical plant modifications and operational procedures which should bring the facility into compliance with its permit.

D. Source Description: LAWPCA provides waste water treatment services for the Cities of Lewiston and Auburn. The City of Lewiston has a land area of approximately 35 square miles and a year 2000 population of approximately 38,000 . Lewiston is a mix of residential, commercial, industrial and service development. In recent years, industrial activity has become less important as medical, government and financial services have gained in importance. The City of Lewiston Public Works Department maintains approximately 150 miles of sewers, of which approximately 45% collect combined sanitary sewage and precipitation related runoff. The City of Auburn has a land area of approximately 65 square miles and a year 2000 population of approximately 24,000.

Auburn reflects a mix of residential, commercial and industrial activity and in recent years has seen a marked increase in its industrial and retail economic sectors. The Auburn Sewerage District maintains approximately 130 miles of sewers of which approximately 24% are combined sanitary and precipitation related runoff sewers. Combined sewer overflows (CSO's) exist on both the Lewiston and Auburn sewer systems and are permitted by the

1. APPLICATION SUMMARY (cont'd)

Department separately from the wastewater treatment facility and have been assigned WDL's #W000684-5T-C-R and #W000685-5T-C-R. Both Cities are working on a CSO abatement plan which calls for the separation of most of the combined sewers (excluding the most built up areas of each community) over a 15 year project life. Both communities have made substantial progress in this effort, and 4 out of 11 original CSOs have been eliminated in Auburn. In Lewiston, the sewer system serving the most active CSO, Gully Brook, has been largely separated and overflows at this structure should be virtually eliminated in the 2002 construction season.

LAWPCA has one permitted CSO on its property on the Lewiston interceptor. This outfall is generally referred to as Outfall 002 or "Structure B".

LAWPCA is responsible for the industrial pretreatment program in both cities. Currently there are 21 Significant Industrial Users (SIU) involved in the Authority's industrial pretreatment program. The Authority's program was first approved by the U.S. Environmental Protection Agency on September 12, 1984 and the Authority's local limits were approved by EPA on December 1, 1995.

LAWPCA also treats septic and holding tank wastes from 25 south-central Maine communities including Lewiston and Auburn. A portion of the 1996 plant upgrade to LAWPCA's treatment facilities included the installation of a new septage receiving facility having 30,000 gallons of holding capacity in two aerated tanks. The aerated tanks can be controlled from the supervisory control and data acquisition (SCADA) system, and programmed to add septic wastes slowly during overnight periods when the loading from the sewers is at a minimum. The septage may also be added to the treatment system manually at a controlled rate. The septage is added to the waste water stream prior to the bar screens. The previous WDL authorized LAWPCA to receive and treat 15,000 GPD of septage. This permit authorizes the facility to receive and treat up to 40,000 GPD of septage during dry flow conditions when not bypassing secondary treatment.

E. Waste Water Treatment: The wastewater treatment facility provides a secondary level of treatment by means of a conventional activated sludge treatment process utilizing diffused aeration. After metering flows from each City independently, the wastewater is screened using two FMC climber screens having ¾ inch clear spacing. The wastewater is then pumped to two aerated grit chambers (37,700 gallons each) using three 150 horsepower vertical mixed flow pumps. (Note: these pumps are due to be upgraded by February 28, 2003 to deliver a minimum of 32 MGD with two pumps operating and one pump remaining on standby.) Following the grit removal, the wastewater flows by gravity through two primary sedimentation basins (409,000 gallons each) and to the secondary system (two aeration basins of 1,390,000 gallons each and two secondary clarifiers of 1,140,000 gallons each). The aeration basins and secondary clarifiers are generally operated in parallel as two separate and independent systems. When flows exceed the capacity of the secondary system a portion of the primary effluent can be bypassed around the aeration basins and clarifiers. The bypassed flow is recombined with the secondary clarifier effluent prior to chlorine injection.

1. APPLICATION SUMMARY (cont'd)

The final effluent is discharged to the Androscoggin River via a 60 inch diameter reinforced concrete pipe extending approximately 265 feet out into the river. The single port outfall 001 discharges vertically upward at right angles to the effluent conveyance pipe and is approximately 4 feet below the mean low river flow and 8 feet below the average river flow elevation.

Screenings, grit and primary sedimentation basin scum and grease are disposed of by the LAWPCA via landfill disposal. Primary sludge is thickened in gravity thickeners and secondary sludge is thickened using dissolved air floatation thickeners prior to being combined and dewatered on two belt presses. The dewatered sludge may then be composted at LAWPCA's compost facility in Auburn, sent to a private composting facility, or lime stabilized for use on farm land.

Septage is received into LAWPCA's septage receiving facility consisting of a coarse bar screen, two 15,000 gallon tanks (with aeration), ultrasonic level measurement in each tank, and a motor driven PLC controlled pinch valve for each tank. The septic tank waste after coarse screening and aeration enters the waste stream just after the Parshall flumes used to measure plant flow and just upstream of the influent bar screens.

2. CONDITIONS OF PERMITS

Maine law, 38 M.R.S.A. Section 414-A, requires that the effluent limitations prescribed for discharges require application of best practicable treatment, be consistent with the U.S. Clean Water Act, and ensure that the receiving waters attain the State water quality standards as described in Maine's Surface Water Classification System. In addition, 38 M.R.S.A., Section 420 and Department Regulation Chapter 530.5, *Surface Water Toxics Control Program*, requires the regulation of toxic substances at the levels set forth for Federal Water Quality Criteria as published by the U.S. Environmental Protection Agency pursuant to the Clean Water Act.

3. RECEIVING WATER QUALITY STANDARDS

Maine Law , 38 M.R.S.A., Section 467. 1 A. (2) indicates that the Androscoggin River main stem, from its confluence with the Ellis River in Rumford, Maine to a line formed by the extension of the Bath-Brunswick, Maine boundary across Merrymeeting Bay in a northwesterly direction is a Class C waterway. Maine Law, 38 M.R.S.A., Section 465.4. describes the standards for classification of Class C waters.

4. RECEIVING WATER QUALITY CONDITIONS

The 2002 Integrated Water Quality Monitoring and Assessment Report (305b and 303d Report), published by the Department states that the receiving water is not meeting the standards of its classification for bacteria due to combined sewer overflows (CSO's). There is also a fish consumption advisory in place on this segment of the river due to the presence of dioxin in fish

4. RECEIVING WATER QUALITY CONDITIONS (cont'd)

tissue. The Department does not have evidence that indicates the discharge from any of the LAWPCA's Outfalls are causing or contributing to the fish consumption advisory. With the implementation of the CSO master plan, there should be a reduction of bacteria being discharged to the river which is expected to result in a long term improvement in water quality.

5. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

A. OUTFALL #001C - Secondary Treated Effluent: [See Permit Special Condition A(1)]

a. Flow: The monthly average flow limitation of 14.2 MGD in the previous WDL is being carried forward in this permitting action and remains representative of the monthly average design flow for the waste water treatment facility.

b. Dilution Factors: Dilution factors associated with the discharge from LAWPCA's waste water treatment facility were derived in accordance with freshwater protocols established in Department Rule Chapter 530.5, *Surface Water Toxics Control Program*, October 1994. With a permitted treatment plant flow of 14.2 MGD, dilution calculations are as follows:

$$\text{Dilution Factor} = \frac{\text{River Flow (cfs)} \times \text{Conversion Factor} + \text{Plant Flow(MGD)}}{\text{Plant Flow(MGD)}}$$

Acute: 1Q10 = 1,035[(1)] cfs $\quad \frac{(1{,}035 \text{ cfs}) \times (0.6463) + (14.2 \text{ MGD})}{(14.2 \text{ MGD})} = 48.1{:}1$

Modified Acute[(2)]

¼ of 1Q10 = 258.8 cfs $\quad \frac{(258.8 \text{ cfs}) \times (0.6463) + (14.2 \text{ MGD})}{(14.2 \text{ MGD})} = 12.8{:}1$

Chronic: 7Q10 = 1,958 cfs $\quad \frac{(1{,}958 \text{ cfs}) \times 0.6463) + (14.2 \text{ MGD})}{(14.2 \text{ MGD})} = 90.1{:}1$

Harmonic Mean: = 4,180 cfs $\quad \frac{(4{,}180 \text{ cfs})(0.6463) + (14.2 \text{ MGD})}{(14.2 \text{ MGD})} = 191.2{:}1$

Foonotes:

(1) The 1Q10 of 1,035 cfs in this permit is less than the 1Q10 of 1,664 cfs in the previous Waste Discharge License and is based on new flow data developed by the Department since the last licensing action.

(2) Chapter 530.5 (D)(4)(a) states that analyses using numeric acute criteria for aquatic life must be based on 1/4 of the 1Q10 stream design flow to prevent substantial acute

toxicity within any mixing zone. The 1Q10 is the lowest one day flow over a ten year recurrence interval. The regulation goes on to say that where it can be demonstrated

5. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

that a discharge achieves rapid and complete mixing with the receiving water by way of an efficient diffuser or other effective method, analyses may use a greater proportion of the stream design, up to including all of it. The Department has made the determination that the discharge does not receive rapid and complete mixing with the receiving water, therefore the default stream flow of ¼ of the 1Q10 is applicable in acute statistical evaluations pursuant to Chapter 530.5.

If site specific information is provided to the Department resulting in a stream design flow of greater than ¼ of the 1Q10 (1,035 cfs), this permit may be re-opened pursuant to Special Condition H of this permit to modify the acute dilution factor.

c. Biochemical Oxygen Demand (BOD_5) & Total Suspended Solids (TSS): The previous licensing action established monthly average and weekly average concentration limits and mass limits for BOD_5 and TSS and are being carried forward in this permitting action. The monthly average and weekly average mass limits for BOD_5 and TSS for dry weather flows are based on a flow limitation of 14.2 MGD and the applicable concentration limits. These limits are based on secondary treatment requirements in the Federal Water Pollution Control Act (Clean Water Act) of 1977 §301(b)(1)(B), federal regulation found at 40 CFR Part 133.102 and Department rule Chapter 525 (3)(III). The previous license also established a daily maximum concentration limit of 50 mg/L that is being carried forward in this permitting action and is based on a Department best practicable treatment requirement common to all WDL's for publicly owned treatment works permitted by the Department. Department guidance for facilities discharging more than 5.0 MGD requires a monitoring frequency of 5/week for BOD_5 and TSS.

The daily maximum mass limits for BOD_5 and TSS in the previous license are not being carried forward in this permit. Carrying forward such a limit in this permit would likely discourage LAWPCA from treating as much waste water as the plant can physically treat during wet weather events.

BOD_5 and TSS mass loading calculations at 14.2 MGD are as follows:

Monthly average = (30 mg/L) (14.2 MGD) (8.34) = 3,553 lbs/day
Weekly average = (45 mg/L) (14.2 MGD) (8.34) = 5,329 lbs/day

This permitting action also establishes a new requirement of a monthly average percent removal of 85% for BOD and TSS pursuant to Department rule Chapter 525(3)(III)(a&b)(3).

d. Settleable Solids - The previous licensing action established weekly average and daily maximum concentration reporting requirements for settleable solids. The Department has reconsidered its position on regulating settleable solids and has made the determination that a daily maximum limit of 0.3 ml/L is considered best practicable treatment (BPT) and as a

result, is establishing a limitation as such in this permitting action. The weekly average concentration reporting requirement in the previous licensing action is not being

5. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

incorporated into this permit as it is unnecessary given the establishment of the daily maximum limit. Department guidance for facilities discharging more than 5.0 MGD requires a monitoring frequency of 1/day for settleable solids.

e. *E. coli* Bacteria The previous licensing action established seasonal monthly average and daily maximum *E. coli* bacteria limits of 142 colonies/100 ml and 949 colonies/100 ml respectively, which are being carried forward in this permit. These limitations are based on the State of Maine Water Classification Program criteria for Class C waters found in Maine law, 38 MRSA, §465(4). Department guidance for facilities discharging more than 5.0 MGD requires a monitoring frequency of 5/week for *E. coli* bacteria.

f. Total Residual Chlorine - Limits on seasonal total residual chlorine (TRC) are specified to ensure that ambient water quality standards are maintained and that BPT technology is being applied to the discharge. The previous licensing action established a daily maximum TRC limit of 0.84 mg/L based on a 1Q10 flow of 1664 cubic feet per second (cfs) and allowing the full 1Q10 flow. New flow data developed by the Department since the last licensing action establishes the current 1Q10 flow as 1,035 cfs.

As rapid and complete mixing of the discharge in the receiving water has not been proven to the satisfaction of the Department, ¼ of the 1Q10 shall be used for dilution calculations. Therefore, the chlorine limit in this permit is based on a modified 1Q10 flow of 258.8 cfs. Department guidance for facilities discharging more than 5.0 MGD requires a monitoring frequency of 2/day for TRC.

Water quality based thresholds for TRC can be calculated as follows:

Parameter	Acute Criteria	Chronic Criteria	Acute Dilution	Chronic Dilution	Acute Limit	Chronic Limit
Chlorine	19 µg/L	11 µg/L	12.8[(1)]	90.1:1	0.24 mg/L	0.99 mg/L

Example calculation: Acute – 0.019 mg/L (12.8) = 0.24 mg/L

Footnote: [(1)] Based on a ¼ of 1Q10 stream flow; ¼(1035cfs) = 258.8 cfs.

g. Dechlorination – If the permittee chooses to employ chlorination as the disinfectant, then to meet the acute water quality based threshold calculated above, the permittee must dechlorinate the effluent prior to discharge. In April of 1999, the Department established a new daily maximum BPT limitation of 0.3 mg/L for facilities that need to dechlorinate their effluent unless calculated water quality based thresholds are lower than 0.3 mg/L.

In the case of LAWPCA's facility, the calculated acute water quality based threshold is lower than 0.3 mg/l, thus the water quality limit shall be 0.24 mg/L as a daily maximum limit. As for the monthly average limitation, the Department's BPT limitation is 0.1 mg/L.

5. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Being that the calculated chronic water quality based limit is higher than the BPT limit of 0.1 mg/L, the BPT limit of 0.1 mg/L shall be the monthly average limit. Until completion of dechlorination facilities or November 30, 2004 whichever comes first, the TRC limit shall be 0.84 mg/L daily maximum carried forward from the previous license. Upon completion of the dechlorination facilities or November 30, 2004 whichever comes first, the TRC limit shall be 0.1 mg/L as a monthly average and 0.24 mg/L as a daily maximum.

h. pH – The previous licensing action established a pH range limitation of 6.0 - 8.5 standard units. The limits were based on Maine Board of Environmental Protection Policy regarding the certification of NPDES permits and were considered best practicable treatment limitations. This permitting action is expanding the range limit from 6.0 – 8.5 to 6.0 - 9.0 standard units pursuant to a new Department rule found at Chapter 525(3)(III)(c). The new limits are considered BPT. Department guidance for facilities discharging more than 5.0 MGD requires a monitoring frequency of 1/day for pH.

i. Whole Effluent Toxicity (WET) & Chemical Specific Testing – LAWPCA's waste water treatment facility is categorically subject to Department rule Chapter 530.5, *Surface Water Toxics Control Program.* A recent data review indicates that LAWPCA has fulfilled the WET and chemical specific testing requirements to date. See Attachment A of this Fact Sheet for the WET test results and submission dates and Attachment B of this Fact Sheet for the chemical specific test results submitted to date.

Department Regulation Chapter 530.5 and Protocol E(1) of a document entitled Maine Department of Environmental Protection, Toxicity Program Implementation Protocols, dated July 1998, states that statistical evaluations shall be periodically performed on the most recent 60 months of WET and chemical specific data for a given facility to determine if water quality based limitations must be included in the permit for a facility.

On August 20, 2002, the Department conducted an evaluation on the aforementioned tests results in accordance with the statistical approach outlined in EPA's March 1991 document entitled Technical Support Document (TSD) for Water Quality Based Toxics Control, Chapter 3.3.2 and Maine Department of Environmental Protection Guidance, July 1998, entitled Toxicity Program Implementation Protocols. Chapter 530.5 §C(2) states when a discharge "...contains pollutants at levels that have a reasonable potential to cause or contribute to an ambient excursion in excess of a numeric or narrative water quality criterion, appropriate water quality based limits must be established in the license upon issuance."

Chapter 530.5 §C(3) states that if data indicates that a discharge is causing an exceedence of applicable AWQC, then:"(1) the Department must notify the permittee of the exceedence; (2) the permittee must submit a toxicity reduction evaluation (TRE) plan for

review and approval within 30 days of receipt of notice and implement the TRE after Department approval; (3) the Department must modify the waste discharge permit to specify effluent limits and monitoring requirements necessary to control the level of pollutant and

5. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

meet receiving water classification standards within 180 days of the Department's approval of the TRE.

WET Testing:

The Department's 8/20/02 statistical evaluation of the WET test results submitted to date indicates the discharge does not exceed or have RP to exceed ambient water quality thresholds (acute - 7.8% and chronic - 1.11% - the mathematical inverse of applicable dilution factors of 12.8:1 acute and 90:1 chronic) for any of the WET species tested to date. Therefore, this permitting action is establishing a monitoring frequency of 1/Year until twelve months prior to the expiration date of the permit at which time the frequency reverts back to a screening level testing of 1/Quarter. See Special Condition A.1.(b) and (c).

Chemical Specific Testing The Department's 8/20/02 statistical evaluation indicates that a 5/14/00 test result of 253 µg/L for zinc has a reasonable potential (RP) to exceed acute ambient water quality criteria (AWQC). The 8/20/02 evaluation utilized an acute dilution factor of 12.8:1 based on ¼ of the 1Q10 stream flow. A more in-depth review of the data for zinc in Attachment C of this Fact Sheet indicates that for 7 tests since 10/14/98, only the 5/14/00 test with a result of 253 µg/L has a RP to exceed AWQC. The highest reported value excluding the 253 µg/L is 80 µg/L.

In accordance with Chapter 530.5 §C(2) and §C(3), daily maximum mass and concentration limits for the chemical specific parameter of concern may be calculated as follows:

Parameter	Acute[1] Criterion		Acute[2] Dilution Factor		Calculated EOP[3] Acute Concentration	Daily Max. Mass Limit
Zinc	29.90 µg/L	x	12.8:1	=	383 µg/L	45.3 lbs/day

Footnotes:

(1) Based on EPA's 1986 AWQC.
(2) Based on ¼ of 1Q10 stream flow; ¼(1035 cfs) = 258.8 cfs
(3) End-of-pipe.

Concentration limits in the previous licensing action are being carried forward in this permitting action based on Department rule Chapter 523, §6(f)(2) which states that pollutants limited in terms of mass additionally may be limited in terms of other units of measurement and the permit shall require the permittee to comply with both limitations. *EPA's Technical Support Document For Water Quality Based Toxics Control*, March 1991, Chapter 5, Section 5.7, recommends that

permit limits for both mass and concentration be specified for effluents discharging into waters with less than 100 fold dilution to ensure attainment of water quality standards. As not to penalize facilities for operating at flows less than permitted design flow of the waste water plant, the Department has increased the calculated concentration limit by a factor of 1.5. This represents an effluent concentration that is achievable through proper

5. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

operation and maintenance of the treatment plant.

Therefore, the end-of-pipe concentration limit may be calculated as follows:

Parameter	Calculated EOP Concentration	Daily Max.(Acute) Concentration Limit
Zinc	383 µg/L	574 µg/L

The testing frequency of once per year for zinc established in Special Condition A of this permit is based on a Department best professional judgment taking into consideration the frequency, severity and timing of the reasonable potential to exceed AWQC.

As for the remaining chemical specific elements/compounds, the 8/20/02 statistical evaluation indicates there are no exceedences or RP to exceed AWQC. Therefore, this permitting action is establishing a monitoring frequency of 1/Year until twelve months prior to the expiration date of the permit at which time the frequency reverts back to a screening level testing of 1/Quarter. See Special Condition A.1.(b)(c).

B. OUTFALL #001D – Primary treated waste water (during wet weather bypass): [See Permit Special Condition A(2)]

For the waste waters received at the treatment facility in excess of the volume that can be treated to a secondary level of treatment, the Department has made a best professional judgment that primary treatment and disinfection constitute best practicable and appropriate treatment.

The monitoring and reporting requirements for flow, surface loading rates for the primary clarifiers, number of overflow occurrences per month, BOD_5, TSS, as well as BOD_5 and TSS percent removal rates for Outfall #001D are being tracked to determine the performance capability of the primary clarifiers at varying flow rates. Influent sampling will be conducted at the Lewiston and Auburn Parshall flumes prior to septage addition and prior to the bar racks. The effluent sampling will be conducted after the primary clarifiers and before the primary effluent is combined with the secondary treated effluent.

C. OUTFALL 002 – Combined Sewer Overflow (during wet weather bypass)

LAWPCA must treat an instantaneous minimum of 25 MGD through secondary and a minimum of 32 MGD through secondary and primary before activating the CSO. In situations

where LAWPCA can treat greater than an instantaneous minimum of 25 MGD through secondary and/or more than 32 MGD through secondary and primary without violating license limits, LAWPCA shall do so before activating the CSO.

5. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

The facility was designed for two influent pumps with a combined capacity of 32 MGD with a third pump on stand by. Paragraph C of the *Administrative Consent Agreement and Enforcement Order* which became effective March 21, 2002, specifies that the present influent pumps shall be replaced or refurbished to provide at least the original facility design capacity of 32 MGD with any two of the three pumps in operation at a time.

6. PRETREATMENT

The permittee is required to administer a pretreatment program based on the authority granted under Federal regulations 40 CFR §122.44(j), 40 CFR Part 403 and section 307 of the Federal Water Pollution Control Act (Clean Water Act) and Department rule Chapter 528, *Pretreatment Program*. The permittee's pretreatment program received EPA approval on September 7, 1984 and as a result, appropriate pretreatment program requirements were incorporated into the previous National Pollutant Discharge Elimination System (NPDES) permit which were consistent with that approval and federal pretreatment regulations in effect when the permit was issued. Since issuance of the previous NPDES permit, the State of Maine has been authorized by the EPA to administer the federal pretreatment program as part of receiving authorization to administer the NPDES program.
Upon issuance of this MEPDES permit, the permittee is obligated to modify (if applicable) its pretreatment program to be consistent with current federal regulations and State rules. Those activities that the permittee must address include, but are not limited to, the following: (1) develop and enforce Department approved specific effluent limits (technically-based local limits - last approved by the EPA on December 1, 1995; (2) revise the local sewer-use ordinance or regulation, as appropriate, to be consistent with federal regulations and State rules; (3) develop an enforcement response plan; (4) implement a slug control evaluation program; (5) track significant non-compliance for industrial users; and (6) establish a definition of and track significant industrial users. These requirements are necessary to ensure continued compliance with the POTW's MEPDES permit and its sludge use or disposal practices.

In addition to the requirements described above, this permit requires that within 180 days of the permit's effective date, the permittee shall submit to the Department in writing, a description of proposed changes to permittee's pretreatment program deemed necessary to assure conformity with current federal and State pretreatment regulations and rules respectively. These requirements are included in the permit (Special Condition O) to ensure that the pretreatment program is consistent and up-to-date with all pretreatment requirements in effect. Lastly, by October 31 of each calendar year, the permittee must submit a pretreatment report detailing the activities of the program for the twelve month period ending 60 days prior to the due date.

7. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

The Department acknowledges that the elimination of CSO #002 and the secondary bypass of sanitary wastewater is a costly long term project. However, as the sewer collection system is upgraded in the cities of Auburn and Lewiston according to the CSO Master Plan and the Nine

7. DISCHARGE IMPACT ON RECEIVING WATER QUALITY (cont'd)

Minimum Controls, there should be reductions in the frequency and volume of secondary treatment bypass and in the CSO bypass at the treatment plant. Also, modifications in the waste water treatment facility operation to avoid bypass flows during dry weather events and to not accept septage and holding tank wastes into the waste stream during secondary treatment bypasses and CSO bypasses, all in accordance with the *Administrative Consent Agreement and Enforcement Order* (effective on March 21, 2002) should substantially improve the quality of the wastewater discharge to the receiving waters. As permitted, the Department of Environmental Protection has determined the existing water uses will be maintained and protected.

The effluent limitations in this permit are equal to or more stringent than the limits in the previous license and/or effective NPDES permit.

8. PUBLIC COMMENTS

Public notice of this application was made in the Lewiston Sun Journal newspaper on or about July 14, 2000. The Department receives public comments on an application until the date a final agency action is taken on that application. Those persons receiving copies of draft permits shall have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to Chapter 522 of the Department's rules.

9. DEPARTMENT CONTACTS

Additional information concerning this permitting action may be obtained from and written comments should be sent to:

Charles Brown
Division of Water Resource Regulation
Bureau of Land and Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017 Telephone: (207) 287-7685

10. RESPONSE TO COMMENTS

During the period October 21, 2002 and November 20, 2002, the Department solicited comments on the proposed draft combination Maine Pollutant Discharge Elimination System permit and Maine Waste Discharge License to be issued to the Lewiston-Auburn Water Pollution Control Authority. The Department did not receive comments from state or federal agencies or interested parties.

The applicant submitted several excellent comments, but Department staff have made the determination that LAWPCA may monitor secondary effluent before chlorine injection which results in the elimination of two administrative outfalls from the proposed draft and the corresponding monitoring thus rendering LAWPCA's comments irrelevant.

Therefore, the Department has not prepared a Response to Comments.